GECKO
Genetics Education Canada: Knowledge Organization
Centre d'éducation en génétique canadien: Connaissances organisées
POINT OF CARE TOOL

FHAMe
Applying family history to personalized medicine

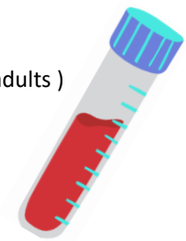
Cardiovascular Disease: Family history clinical decision support tool for risk assessment and management

Guidelines from the Canadian Cardiovascular Society (CCS) recommend universal lipid screening of both those assigned male at birth (AMAB) and those assigned female at birth (AFAB) beginning at age 40 years and older. Regular atherosclerotic cardiovascular disease (ASCVD) risk assessment is recommended every 5 years for men and women aged 40-75 years, using a validated risk model (e.g. Framingham Risk Score [FRS] or the Cardiovascular Life Expectancy Model [CLEM]). Recent PEER simplified guidelines for those at average risk of CVD (those without known traditional CVD risk factors) suggest universal lipid screening starting at 40 for those AMAB and at age 50 for those AFAB.

Individuals with factors associated with increased risk for CVD (e.g. diabetes, atrial hypertension, smoking, chronic kidney disease, family history of premature CVD (in those AMAB <55 years and in those AFAB <65 years), CVD in 2 or more relatives on the same side of the family, loss of a relative to sudden unexplained death, or dyslipidemia) can be offered lipid screening regardless of age.

Screening can be done for everyone by:

- History and physical examination
- Standard lipid profile (screening with non-fasting lipid testing is recommended in most adults)
- Fasting plasma glucose or HbA1c
- eGFR
- Lipoprotein(a) (once in patient's lifetime, with initial screening)



Optionally consider:

- ApoB
- Urine ACR

A family history of cardiac related symptoms (below) may indicate an underlying heritable condition and a high risk for CVD (e.g. inherited arrythmia, channelopathy, cardiomyopathy, inherited dyslipidemia). Individuals with an inherited cardiac disorder cannot be assessed using FRS or CLEM. **Consider referral to your local cardiologist or geneticist for further assessment.**

Indications to consider referral for cardiac assessment and/or genetic assessment: A personal and/or family history of:

- CVD at young ages
- Family history of unexplained sudden death <40 years (including unexplained infant death)
- Syncope or pre-syncope with exercise, intense, emotional, stressful or startling events
- Seizures/drowning/unexplained single motor vehicle accident
- Cardiac device at a young age (e.g. pacemaker, implantable cardioverter defibrillator)
- Cardiac disease without usual risk factors

References:

Pearson GJ, Thanassoulis G, Anderson TJ, et al. 2021 Canadian Cardiovascular Society guidelines for the management of dyslipidemia for the prevention of cardiovascular disease in adults. Can J Cardiol. 2021 Aug;37(8):1129-1150.

Kolber MR, Klarenbach S, Cauchon M, et al. PEER simplified lipid guideline 2023 update: prevention and management of cardiovascular disease in primary care. Can Fam Physician. 2023 Oct;69(10):675-686.

Find the contact information for your local Genetics Centre here or go to www.geneticseducation.ca > Genetics Centres > Canada > Clinics.

To learn more about cardiac conditions with a strong genetic component (arrhythmias, cardiomyopathy, hypercholesterolemia) click here or go to www.geneticseducation.ca > Point of Care Tools > Cardiogenomics.

- Familial hypercholesterolemia
- Heritable Thoracic Aortic Disease
- Hypertrophic cardiomyopathy
- Long QT syndrome